(11) **EP 4 039 776 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 24.08.2022 Bulletin 2022/34

(43) Date of publication A2: 10.08.2022 Bulletin 2022/32

(21) Application number: 21208654.0

(22) Date of filing: 17.11.2021

(51) International Patent Classification (IPC): C09K 19/58 (2006.01) C09K 19/04 (2006.01)

(52) Cooperative Patent Classification (CPC): C09K 19/586; C09K 2019/0448

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated Extension States:

BA ME

Designated Validation States:

KH MA MD TN

(30) Priority: 20.11.2020 EP 20208857

(71) Applicant: Merck Patent GmbH 64293 Darmstadt (DE)

(72) Inventors:

 Mulcahy, Stephen Feltham TW14 8HA (GB)

Parri, Owain Llyr
 Feltham TW14 8HA (GB)

(54) POLYMERISABLE LC MATERIAL AND POLYMER FILM

(57) The instant invention relates to an optical component and a electro optical devices comprising the optical component. The instant invention further relates to a cholesteric polymerizable liquid crystalline (LC) material preferably utilized in an optical component in accordance with the present invention, to a process for the pro-

duction of the cholesteric polymerizable LC material, to a process to convert the cholesteric polymerizable material into a polymer film, a polymer film obtainable from the cholesteric polymerizable LC material, the use of the polymer films in an optical component or device comprising a polymer film in accordance with the invention.



PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 21 20 8654

Category	Citation of document with in of relevant pass	ndication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
х	WO 01/93652 A2 (KON ELECTRONICS NV [NL] 13 December 2001 (2 * page 1, lines 1-1 * page 23, line 30 figure 10 * * figure 2A to 2F *) 001-12-13) 0 * - page 24, line 3;	1-17	INV. C09K19/58 C09K19/04
x	[JP]) 16 October 20 * paragraph [0001]		1-17	
				TECHNICAL FIELDS SEARCHED (IPC)
INCOL	MPLETE SEARCH			_
Claims se Claims no	ch Division considers that the present ly with the EPC so that only a partial searched completely : earched incompletely : of searched : or the limitation of the search: sheet C	application, or one or more of its claims, do earch (R.62a, 63) has been carried out.	ies/do	
	Place of search	Date of completion of the search		Examiner
	The Hague	14 July 2022	Sch	noenhentz, Jérôme
X : part Y : part docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anolument of the same category mojoical background -written disclosure	E : earlier patent d after the filing d her D : document cited L : document cited	ocument, but publ late I in the application I for other reasons	ished on, or



Claim(s) completely searchable:

INCOMPLETE SEARCH SHEET C

Application Number EP 21 20 8654

5

5

10

15

20

25

30

35

40

45

50

55

1-17 Claim(s) not searched: 18-24 Reason for the limitation of the search: Although product claims 1 and 24 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 84 EPC. In the reply to the invitation pursuant to Rule 62a(1), the applicant confirmed on 30-05-2022 that claims 1 to 17 should be searched. The unsearched subject matter should be excised from the application. A divisional application comprising said unsearched subject matter can be filed in any regional phase.

EP 4 039 776 A3

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 21 20 8654

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-07-2022

10	cit	Patent document cited in search report		Publication date	on Patent family member(s)			Publication date	
			A2		CNT		7		
	WC	0193652	AZ	13-12-2001	CN EP	1388911 1210643		01-01-2003 05-06-2002	
					JP	2003535379		25-11-2003	
15					KR	2003333379		09-04-2002	
					US	20020020304		27-12-2001	
					US	2001033089		13-05-2004	
					WO	0193652		13-12-2001	
20	EP	1249483	A1	16-10-2002	EP	1249483		16-10-2002	
					KR	20020079602		19-10-2002	
					TW	583299		11-04-2004	
					US	2002150698	A1	17-10-2002	
25									
30									
25									
35									
40									
45									
50									
50									
	o								
	FORM P0459								
	AM F								
55	ē								

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82